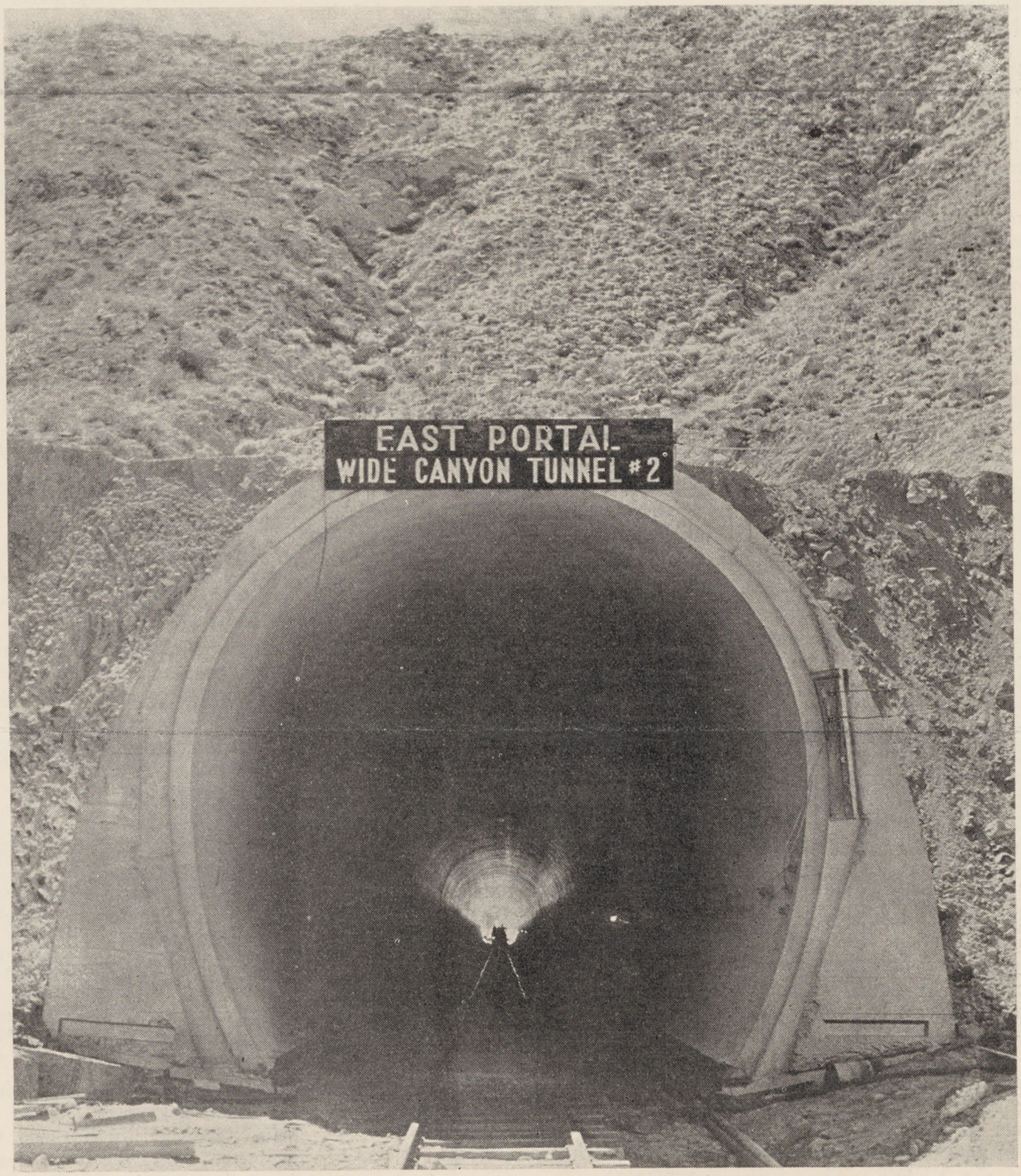
• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. II AUGUST 20, 1935 No. 16



Completed Arch in Wide Canyon Tunnel No. 2

· COLORADO RIVER ·
AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
LOS ANGELES, CALIFORNIA

Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. 11 August 20, 1935 No. 16

SOMETHING TO CELEBRATE

Nothing could be more fitting than the ceremony being planned by the District Board of Directors when the first earth is turned in the job of driving the San Rafael tunnels of the aqueduct distribution system.

Work on these bores marks the bringing of Colorado River Aqueduct construction into three of the cities in the District—Los Angeles, Pasadena, and Glendale—and will constitute the most westerly point yet reached by the aqueduct builders.

Up to now aqueduct construction has been a somewhat vague thing to the average citizen of the District; and understandably so, since the work has been going forward in remote and little know desert regions.

The proposed celebration would do much to dramatize for Mr. and Mrs. Citizen the fact that the country's largest construction project is *their* project and is being carried forward literally in their back yards.

And certainly no time could be more appropriate than the present with autumn just around the corner; and with autumn marking the beginning of the peak year in aqueduct construction.

THE PICNIC

If the amount of time and labor devoted to it constitute a criterion, the Metropolitan Water District employees picnic, at Brookside Park, Pasadena, on September 15, will be a huge success.

Chairman B. H. Martin and his committee members of the Los Angeles Office are laboring long and arduously on the multitudinous details which are involved in preparations for such an affair. They feel that only by such tactics can they hope to match the picnic given by field employees last year.

THANKS

The Editor wishes to take this means of thanking the increasing number of correspondents in field and office who are sending in personal items to enliven the pages of the NEWS. They help a lot!

$46,000,000 TO BE SPENT FOR AQUEDUCT MATERIALS AND PAYROLLS IN 1935-36

Though taxes collected by the Metropolitan Water District during the fiscal 1935-36 will total only $3,486,091, Colorado River Aqueduct construction during that period will result in placing $46,000,000 into circulation for materials and labor, it was revealed Friday following the fixing of a twenty cent tax rate for the twelve month period by Water District directors.

In fixing the tax rate for the year, the Board authorized the issuance of the following statement:

"Approximately 12,000 persons, or about twice the number now at work, will be given employment on the construction of the Colorado River Aqueduct during the fiscal year 1935-1936.

"In addition to Aqueduct construction work now in progress with approximately 6,000 residents of the Metropolitan Water District employed, several new and large phases of Aqueduct construction are to be set under way in the immediate future. This new work, coupled with the present program of construction will carry a pay roll of $18,000,000 for the forthcoming twelve months.

"Investment of approximately $46,000,000 will be made by the District in pay rolls directly on Aqueduct construction and for Aqueduct materials and supplies during the fiscal year 1935-36. Much of the materials used on the Aqueduct, including large quantities of cement and steel, will be manufactured or fabricated locally by Southern California business firms and Southern California labor.

"Investment of this sum of approximately $46,000,000 during the year 1935-36 will be made from the proceeds of Metropolitan Water District bonds. The District is now selling its bonds to the Reconstruction Finance Corporation.

"Under the State law, principal payments on District bonds may be deferred for a period of fifteen years after issuance of the bonds. This means that it is necessary to levy taxes to pay only the interest charges on Aqueduct bonds sold from time to time. Charges on these interest payments have also been reduced for this year as a result of an agreement on the part of the R. F. C. to reduce the interest from 5 per cent to 4 per cent.

"Because of these favorable factors the District's bond charges may be met during the year 1935-36 by a tax levy of $3,486,091. To provide this sum the Board of Directors of the District has authorized a levy amounting to 20 cents per $100 of assessed valuation.

"It is interesting to note that for every dollar of taxes levied there will be about five dollars paid out by the District for the employment of residents of District cities on Aqueduct work. The collection of approximately $3,400,000 in taxes will release $18,000,000 in District bond money directly for pay rolls, and $28,000,000 for Aqueduct materials and supplies, a large part of which will also go into payrolls for residents of District cities.

"The 20 cent tax rate authorized by the District Board of Directors for the present fiscal year will mean that the taxes on a home worth $5,000, and assessed on a 40 per cent basis at $2,000, will amount to $4.00 per year.

"The District's investment in materials and pay rolls for the present fiscal year will be more than twice the amount invested the past fiscal year, when the tax rate was fixed at 10 cents per $100.

"Aqueduct construction is scheduled to reach its peak this coming year. This work has been under way since December, 1932, and is scheduled to be completed in 1938.

"New Aqueduct construction work to be launched this fiscal year includes:

(1) The 230,000-volt power transmission line from Boulder Dam to points of use along the Aqueduct, 247 miles long.

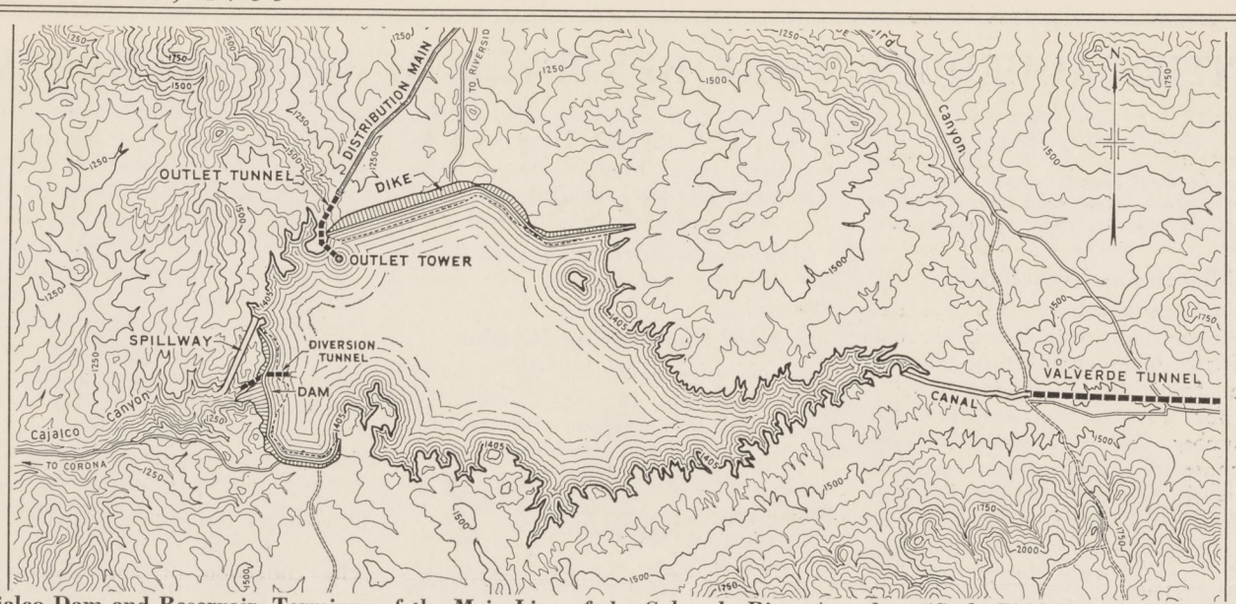
(2) Installation of five Aqueduct pumping stations.

(3) Construction of Cajalco Dam and Reservoir.

(4) Construction of new tunnels and pipe line sections on the Aqueduct distribution system.

"In addition, construction will be continued at full speed on the 105 miles of Aqueduct tunnels already under way, as well as the 150 miles of conduits, canals, and siphons on the main Aqueduct.

"The thirteen cities included in the Metropolitan Water District are Anaheim, Beverly Hills, Burbank, Compton, Fullerton, Glendale, Long Beach, Pasadena, San Marino, Santa Ana, Santa Monica, Torrance, and Los Angeles."



Cajalco Dam and Reservoir, Terminus of the Main Line of the Colorado River Aqueduct (Scale 7000 Feet to the Inch).

GRIFFITH WINS CAJALCO DAM CONTRACT

Construction of Cajalco Dam, behind which will be formed the terminal reservoir at the western end of the main line of the Colorado River Aqueduct, will be launched within a few weeks, it was indicated last week when directors of the Metropolitan Water District awarded a contract for the job to the Griffith Company on the recommendation of General Manager Weymouth.

The Griffith bid of $4,646,856 was low among six submitted, the figures ranging as high as $5,449,672. The total estimated cost of the dam and reservoir is $6,500,000, including materials, rights of way, engineering, and other items to be furnished by the District.

Approximately a half mile long and 185 feet high, Cajalco dam will be of earth-fill construction and will form a reservoir with a capacity of 100,000 acre feet of water. Located approximately ten miles south of Riverside, the reservoir will serve as a connecting link between the main aqueduct and the aqueduct distributing system which will carry Colorado River water to the member cities of the Metropolitan Water District.

Bids on the work were received following receipt by the District of approval of plans and specifications for the dam from the California State Engineer's office.

The reservoir will be formed by the dam itself, extending across Cajalco Canyon, and by a dike to be built across the low rim on the north side of Cajalco basin. The moving of more than 7,000,000 cubic yards of excavated material will be involved in the building of the two structures.

The new lake will be three and one-half miles in length and one and one-half miles wide.

Design of the dam was carried forward under the direction of Assistant Chief Engineer Julian Hinds of the District. Location of the structure, with special reference to the safety of the site and type of dam, was studied in detail and approved by three successive boards of engineering consultants, members of which were:

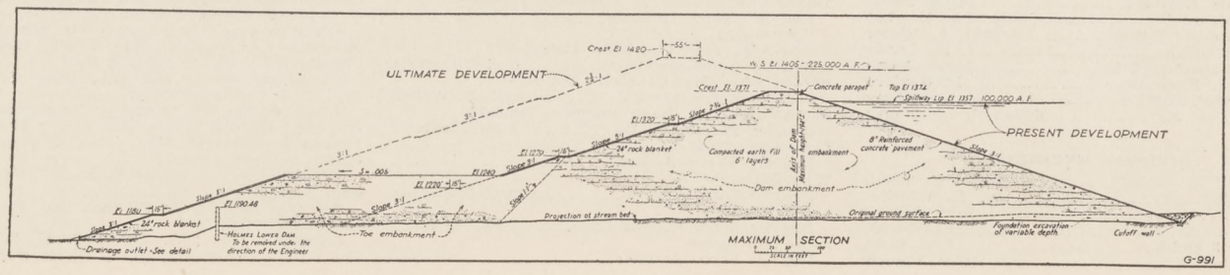
(1) Thaddeus Merriman, former Chief Engineer of the New York City Board of Water Supply; the late A. J. Wiley of Boise, Idaho; and Richard R. Lyman of Salt Lake City, reporting in December, 1930, specifically on the required storage capacity, etc.

(2) Mr. Merriman, Mr. Lyman, the late Arthur P. Davis, former Director, U. S. Reclamation Service and Consulting Engineer of Oakland, California; Harvey S. Mudd, Mining Engineer, Geologist and Executive of Los Angeles; and Royal W. Sorensen, Consulting Electrical Engineer, California Institute of Technology, Pasadena, reporting in April, 1932, with a favorable conclusion on the adequacy of the Cajalco site for reserve storage.

(3) Mr. Merriman, John L. Savage, Chief Designing Engineer of the U. S. Bureau of Reclamation, Chas T. Leeds, prominent conculting engineer of Los Angeles, and Chas. D. Marx, Consulting Engineer and Prof. Emeritus of Civil Engineering, Stanford University, California, reporting in September, 1933, with complete approval of the Cajalco reservoir and dams.

In addition, detailed geological studies and reports have been prepared by F. L. Ransome and John P. Buwalda, Consulting Geologists of California Institute of Technology, Pasadena.

Completion date for the dam is set at October 31, 1938, and an average of 300 to 350 men will be employed over the three-year period.



MONTH'S AQUEDUCT WORK REVIEWED BY GENERAL MANAGER

(EDITOR'S NOTE: *The following is a brief summary of the Metropolitan Water District's activities as set forth in the monthly report of General Manager and Chief Engineer Weymouth, filed with the Board of Directors in August, covering work done in July.*)

Miscellaneous Activities

During the month of July 701 employment applicants were cleared through the District labor employment office as eligible, from the standpoint of residence, for work on the aqueduct. Of this number, 260 were made available in response to requisitions on force account work, and 441 were made available for aqueduct contract work. Certificates of registration (permanent identification cards) were issued to 387 applicants, making the total of such certificates issued up to July 31, 13,326.

Field Engineering and Construction

Testing Laboratory — Approximately 27,500 barrels of cement from the Colton, Riverside, Victorville, and Monolith mills were sampled and tested during July. The diamond drill core-cutter was transferred to Division 2, and the cores cut up to this time from the canal lining show well placed concrete of excellent density and closely filled around the reinforcement.

Operation of Utilities—During July a total of 6,182,027 kwhr of power was used, about 14,405 (long distance) telephone calls were handled, and 2,932,706 cubic feet of water delivered.

Aqueduct Construction—(See Page 6 for current information on tunnel progress.)

Civil Engineering Division

Specifications—During the month of July four sets of specifications were issued, and bids were received under six sets of specifications previously issued.

Design—The principal work of the month was in connection with the preparation of specifications for the distribution division.

Statistical Reports — A complete revision was made of the project budget to reflect the latest progress data and actual costs to June 30, 1935.

Hydrography—At the request of the Committee on Water Problems, the staff has compiled statistics, prepared maps and memoranda, and attended numerous conferences with interested directors and with representatives of foothill water users and companies.

Electrical Engineering Division

Work was continued on the preparation of the final drawings for Intake and Gene pumping plant buildings. Final locations of penstocks, surge chambers, and other structures were made for all plants. Tests were started in the electrical laboratory at Caltech to determine the relative merits of the sample insulators submitted by the bidders on Specifications No. 102. These tests will be continued for several weeks. Drawings were prepared for the extensions to the construction water supply system, necessitated by the additional requirements of the contractors. Assistance was given the Coachella Division engineers in preparing specifications and ordering materials for the concrete aggregate plants and tunnel lining equipment.

Personnel Division

The net labor turnover for all divisions for June was 14.06 per cent, compared with 15.30 per cent for May.

Purchasing Division

Purchase orders issued during July amounted to approximately $186,272, representing the issuance of 1,599 orders.

Accounting and Costkeeping Division

Actual costs to July 31 amounted to $48,015,953.08, covering work and activities the total cost of which is estimated at $110,654,423.

DIRECTORY

BOARD OF DIRECTORS

W. P. Whitsett, Chairman
Franklin Thomas, Vice-Chairman
S. H. Finley, Secretary

Anaheim	E. P. Hapgood
Beverly Hills	Arthur Taylor
Burbank	J. L. Norwood
Compton	Warren W. Butler
Fullerton	Walter Humphreys
Glendale	Bernard Brennan
Long Beach	William M. Cook
Los Angeles	I. Eisner
Los Angeles	Perry H. Greer
Los Angeles	Otto J. Emme
Los Angeles	D. W. Pontius
Los Angeles	John R. Richards
Los Angeles	Victor H. Rossetti
Los Angeles	W. P. Whitsett
Pasadena	Franklin Thomas
San Marino	J. H. Ramboz
Santa Ana	S. H. Finley
Santa Monica	W. H. Carter
Torrance	Charles T. Rippy

Charles H. Toll, Treasurer
D. W. Pontius, Controller

GENERAL STAFF

General Mgr. and Chief Engr.	F. E. Weymouth
Asst. General Manager	J. L. Burkholder
Asst. Chief Engineer	Julian Hinds
General Counsel	James A. Howard
Asst. General Counsel	Arthur A. Weber
Asst. Controller	J. M. Luney
General Superintendent	James Munn
Chief Elec. Engineer	J. M. Gaylord
Asst. to Gen. Mgr.	Don J. Kinsey
Secy. to Gen. Mgr.	Elisabeth von Hagen

DIVISION ENGINEERS

Division 1	R. C. Booth
Division 2	W. E. Whittier
Division 3	John Stearns
Division 4	B. C. Leadbetter
Divisions 5 and 6	J. B. Bond
Distribution	R. B. Diemer

SUPERINTENDENTS

(Tunnel)

Colorado River, Copper Basin and Whipple Mt. Tunnels, Walsh Construction Co., F. T. Huntington, Gen. Supt.; W. A. Huntington and Jack Lamey, Tunnel Supts.

Coxcomb Tunnel and Iron Mt. shaft, Winston Bros., E. A. Bernard, Gen. Supt.; F. T. Hillman and R. B. Johnson, Tunnel Supts.

Iron Mt. Tunnel, West Portal, Utah Constr. Co., Ben Arp, Gen. Supt.

East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, C. J. Kavanagh, Gen. Supt.

West Eagle Mt. Tunnel, west portion, L. E. Dixon and Bent Bros., P. C. Guinn, Gen. Supt.

Pasadena Tunnel (Distribution), L. E. Dixon Co., Bent Bros. Inc., and Johnson, Inc., H. J. King, Gen. Supt.; D. L. Simpson, Supt.

Hayfield Tunnel No. 1, Hunkin & Conkey Constr. Co., G. B. Hoag, Gen. Supt.; F. Backlund, Tunnel Supt.

Hayfield Tunnel No. 2, Shofner & Gordon, H. E. Warden, Gen. Supt.

Cottonwood Tunnel, J. F. Shea Co., Inc., Gilbert Shea, Gen. Mgr.; Wallace Young, Master Mechanic.

Mecca Pass Tunnels, Morrison-Knudsen—Completed.

Coachella Division, B. C. Leadbetter, Gen. Supt.
Yellow Canyon Adit, E. Coachella Tunnel—
District Force Account—A. W. Filion, (Gen. Foreman).
Fargo Adit, East Coachella Tunnel—
District Force Account.....Neil O'Donnell
Berdoo Adit, East Coachella Tunnel—
District Force Account.....F. A. Weller
Pushawalla Adit, East Coachella Tunnel—
District Force Account.....John Jackman
Thousand Palms—
District Force Account.....
Wide Canyon—
District Force Account.....Kenneth MacIsaac
Long Canyon—
District Force Account.....C. E. Sides
Little Morongo—
District Force Account.....

Whitewater Tunnels (completed) and Monrovia Tunnels (Distribution), West Construction Co., H. E. Carleton, Gen. Supt.; O. V. Humason, Peter Brisbois, and Angus MacDonnell, Tunnel Supts.

San Jacinto Tunnel, District Force Account, C. R. Rankin, Gen. Supt.; Frank Laird, Tunnel Superintendent; E. E. McCabe, W. L. Taylor, and Jack Stone, Tunnel Superintendents.

Bernasconi Tunnel, Hamilton & Gleason Co., Harry S. Stocker, Gen. Supt.

Valverde Tunnel, Dravo Contr. Co., R. W. Remp, Gen. Supt.; H. C. Richardson, Asst. Gen. Supt.; Fred Youmans, Tunnel Supt.; John Will, Concrete Supt.

SUPERINTENDENTS

(Canal, Siphon, Conduit)

Schedules Nos. 5 and 5A, Jahn & Bressi Construction Company, Joseph Muscolo, Gen. Supt.; Dominick Bressi, Asst. Gen. Supt.; C. M. Ellison, Concrete Supt.

Schedules Nos. 2, 2A, 2B, 3, 3A, 3B, 7 and 7A, Barrett & Hilp and Macco Corp.; H. W. McKinley, Supt.

Schedules Nos. 6, 8, 8A and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesner, Gen. Supt.; L. L. Green, Excav. Supt.; A. V. Fisher and V. S. Price, Concrete Supts.

Schedules Nos. 9, 9A, 9B and 9C, The Utah Construction Company, Ben Arp, Gen. Supt.; E. C. Caldwell, Excav. Supt.

Schedules Nos. 10, 10A and 10B, Aqueduct Construction Company, C. M. Elliott, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt.

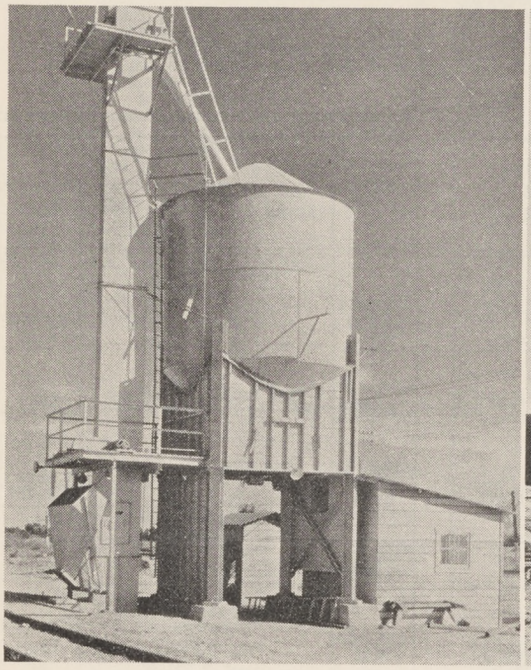
Schedules Nos. 12 and 12A, Three Companies, Inc., C. J. Kavanagh, Supt.

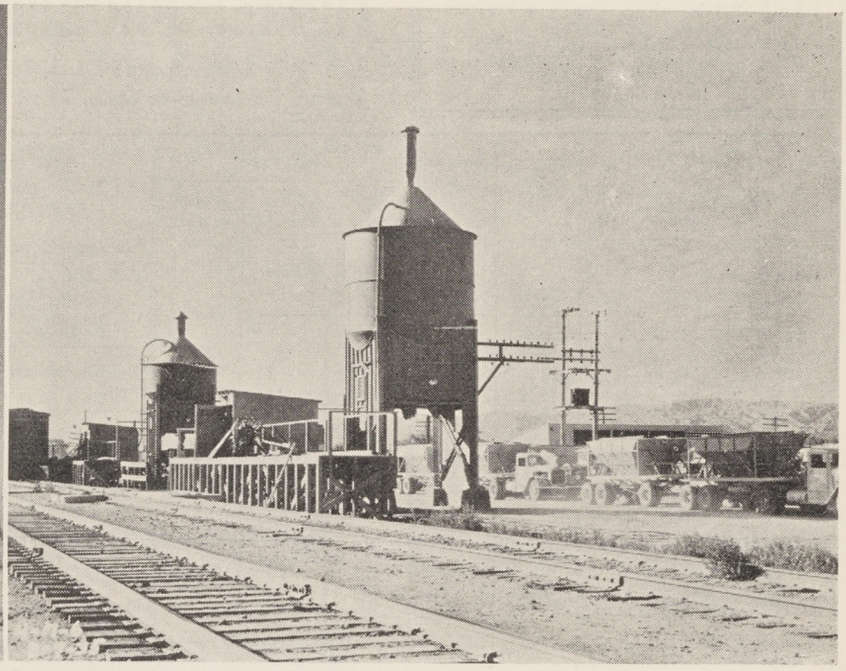
Schedules Nos. 14, 15 and 16, Thompson-Starrett Co., Inc., William Hayes, Gen. Supt.; Thomas McIlvenna and Joseph Rice, Field Supts.; Rodney Smith, resident engineer.

Schedule 18-J, Morrison-Knudsen, J. O. Young, Gen. Supt.

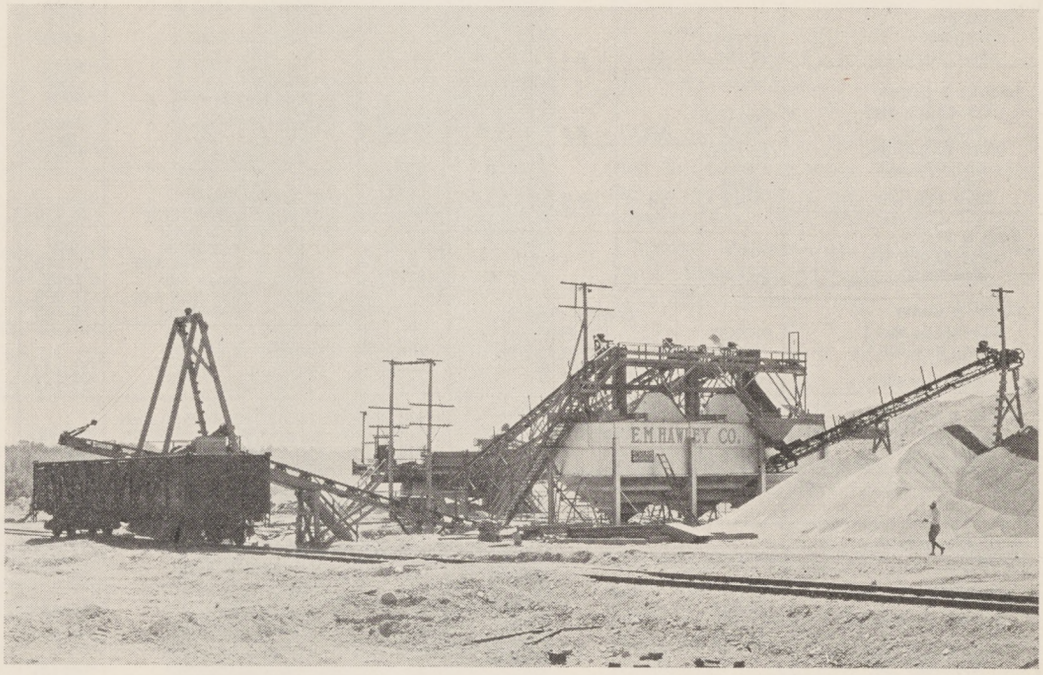
Schedule No. 20, J. F. Shea Co., Inc., H. F. Remmerbohm, Supt.

Schedules Nos. 20A, 20B, 20C, 21, 22 and 23, The Griffith Company, Harry Davis, Supt.





With tunnel lining operations already under way at more than half a dozen points along the aqueduct line and more to be started in the near future—as well as the resumption of extensive concrete pouring on aqueduct siphons, conduits, and canals east of San Jacinto—the handling of cement and aggregates rapidly increases in importance in the aqueduct construction picture. Above are shown cement silos and unloading equipment at Indio (left) and Mecca, two of the important railroad points on the aqueduct. At the right is the E. M. Hawley Company's aggregate plant No. 1 near Earp, supplying rock and sand for aqueduct open work.



Ward To Be Cajalco Resident Engineer

With the awarding of the contract for Cajalco Dam and Reservoir, announcement was made last week of the appointment of Richard B. (Dick) Ward as resident engineer on the new work. Dick has been with the District for the past four years. His experience includes work with the Reclamation Service, the Government Railway in Alaska, and the L. A. County Sanitation District.

Distribution Tunnel Men Receive Praise

High tribute was paid to employees of the District and the West Construction Company, on the Monrovia tunnels of the Distribution System, by an editorial comment in the Pasadena *Post* last week. The *Post* observed that "instead of increasing the fire hazard, the establishment of a number of tunnel camps throughout the mountain areas near Pasadena probably has reduced the hazard."

To Receive Bids On Boulder Equipment

Bids on the huge turbines and generators which will supply power to the aqueduct will be received by the Bureau of Reclamation at its Denver office September 9, it was announced last week.

The Bureau intends to install two 115,000 horsepower turbines and two 82,500 kva generators on the Nevada side of Boulder Dam in the battery of the Metropolitan Water District.

BEST PROGRESS THIS PERIOD
16 FT. DIA. TUNNELS
6-Day Week—1000 Palms No. 1—745 ft.
7-Day Week—Whipple Mtn. East—1,010 ft.
10 FT. DIA. TUNNELS
Pasadena—2,106 ft.

TUNNEL PROGRESS

July 16 to August 15, 1935
Tunnel Excavated to Date, 78.62 Miles

BEST WEEK'S PROGRESS, 1935
16 FT. DIA. TUNNELS
6-Day Week—Seven Palms West—225 ft.
7-Day Week—Whipple Mt. East—302 ft.
10 FT. DIA. TUNNELS
Pasadena—521 ft.

TUNNELS ON CONTRACT	Length in feet	Number of Shifts	EXCAVATION PROGRESS IN FEET: Average Per Shift	This Period	Total to date
Walsh Constr. Co.		Concrete Progress to Date Arch, 3,528 ft. Invert, 0			
COLORADO RIVER	(5482)				
West Portal	5482				5482
COPPER BASIN, No. 1	(705)				
West Portal	705			0	705
COPPER BASIN, No. 2	(11,568)				
East from adit	1878			0	1878
Adit	330			0	330
West from adit	9690			0	9690
WHIPPLE MT.	(32,265)				
East from adit	18,352	91	11.1	1010	15,483
Adit	924			0	924
West from adit	13,913	91	8.5	773	12,390
Winston Bros.					
IRON MT.	(39,759)				
East from shaft	9844	81	5.2	420	7687
Shaft	165			0	165
West from shaft	13,743	81	6.8	549	12,387
Utah Constr. Co.					
IRON MT.					
West Portal	16,172	83	8.1	668	16,172
Winston Bros.					
COXCOMB	(17,795)				
East Portal	17,795	81	8.4	678	14,171
Broderick & Gordon					
EAST EAGLE MT.	(9,442)				
West Portal	9442	58	8.5	491	6004
WEST EAGLE MT.	(26,494)				
East from adit	7871			0	7841
Adit	2008			0	2008
West from adit	7974	75	5.8	434	7659
Dixon & Bent					
WEST EAGLE MT.					
West Portal	10,649			0	10,649
Hunkin & Conkey		Concrete Progress to Date Arch, 6,931 ft. Invert, 0			
HAYFIELD, No. 1	(9,733)				
East from adit	5337				5337
Adit	511				511
West from adit	4396				4396
Shofner & Gordon		Work completed 7-27-35			
HAYFIELD, No. 2	(5435)				
West Portal	5435				5435

TUNNELS ON CONTRACT	Length in feet	Number of Shifts	EXCAVATION PROGRESS IN FEET: Average Per Shift	This Period	Total to date
J. F. Shea Co.		Concrete Progress to Date Arch, ft. Invert, 0			
COTTONWOOD	(20,105)				
East Portal	10,118				10,118
West Portal	9987				9987
Morrison-Knudsen					
MECCA PASS TUNNELS	(5,940)	Work Completed 2-10-35			5940
West Constr. Co.					
WHITEWATER	(10,232)	Work Completed 4-15-35			
No. 1, West Portal	2060				2060
No. 2, East Portal	8172				8172
Hamilton & Gleason		Concrete Progress to Date Arch, 3,337 ft. Invert, 0			
BERNASCONI	(6220)				
East Portal	6220				6220
Dravo Contr. Co.		Concrete Progress to Date Arch, 8,522 ft. Invert, 7,791 ft.			
VALVERDE	(38,765)				
East from Shaft 1	2140				2140
Shaft 1	64				64
West from Shaft 1	1525				2265
East from Shaft 2	5400			0	4660
Shaft 2	204			0	204
West from Shaft 2	5400	54	3.0	162	8105
East from Shaft 3	6950	54	1.6	88	4245
Shaft 3	192			0	192
West from Shaft 3	6950	90	5.4	482	8350
East from Adit	5117	90	4.3	387	2326
Adit	391			0	391
West from Adit	5283	90	1.8	162	2383
West Constr. Co.					
MONROVIA TUNNELS*	(40,910)				
No. 1, West Portal	7865	89	11.1	989	2767
No. 2, West Portal	940			0	298
No. 3, East from Adit	11,340				0
Fish Canyon Adit	1632	77	7.6	586	597
No. 3, West from Adit	10,000				0
No. 3, West Portal	10,765	89	7.3	649	2580
Dixon, Bent & Johnson					
PASADENA TUNNEL*	(12,143)				
West Portal	12,143	89	23.7	2106	8865
Total Excav. Contract Tunnels exclusive of Adits and Shafts (In Miles)	292,993 55.49	1286	7.8	10,048 1.90	234,847 44.48

TUNNELS ON FORCE ACCOUNT

EAST COACHELLA TUNNEL	(96,605)				(91,289)
East Portal	10,204			0	10,204
Yellow Canyon Adit	21,926			0	21,926
Fargo Canyon Adit		81	8.2	662	12,106
West from Adit	31,024				
East from Adit		81	5.5	443	13,602
Berdoo Canyon Adit	22,642			0	22,642
Pushawalla Canyon Adit	10,809			0	10,809
West Portal					
WEST COACHELLA TUNNELS	(81,454)				(68,330)
THOUSAND PALMS					
No. 1, E. from W. Prtl.	16,058	81	9.2	745	12,338
No. 2, W. from E. Prtl.	3838	Arch Concrete, 3,832 ft.			3838
WIDE CANYON					
No. 1, W. from E. Prtl.	5774	Arch Concrete, 794 ft.			5774
No. 1, E. from E. Prtl.	8531				8531
No. 2, W. from E. Prtl.	848	Arch Concrete: 848 ft.			848
SEVEN PALMS	(16,730)				
E. Portal	8390	Arch Concrete, 3,426 ft.			4810
W. Portal	8340	81	7.6	615	10,719

LONG CANYON	(15,295)				
West from E. Portal	15,295	81	7.0	564	10,528
BLIND CANYON	(6848)				
East from W. Portal	6848			0	5580
MORONGO NO. 1	(5712)				
West from E. Portal	5712			0	5364
MORONGO NO. 2	(1820)				
West from E. Portal	1820				0
SAN JACINTO TUNNEL	(67,563)				(20,666)
East from Cabazon Shaft	8553	93	4.9	454	3340
West from Cabazon Shaft	43,511	93	2.1	192	6016
East from Potrero Shaft		93	3.8	351	809
West from Potrero Shaft	15,499	93	4.7	439	2737
East from West Prtl.		93	4.5	422	7764
Total excav. Force Acct. Tunnels excl. of Adits and Shafts (In Miles)	245,622 46.52	870	5.6	4887 0.93	180,285 34.14
Total Tunnel Excavation (Miles)	102.01		6.9 ft.	2.83	78.62

*Distribution System Tunnels—Diameter 10 ft. Total length 10.05 miles. Adits and Shafts not included in total footage.

NEWS FROM FIELD AND OFFICE

A seldom heard from department of the M. W. D., the Physical Examining Office has broken its long silence to announce, through A. S. Lewis, that on August 12, 1935, Dr. Mason finished the ten thousandth chest thumping of prospective employees. The office was opened on February 27, 1933.

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Col. J. Franklin Bell, former director in charge of exhibits at the Chicago World's Fair, was a visitor recently at the San Diego Exposition and paid tribute to the Palace of Water exhibit by ranking it among the top three exhibits of the entire show. The other two mentioned by Colonel Bell were the Ford Exhibit and the Standard Oil Company's Tower of the Sun.

* * *

Employees of the Mails & Files Division of the Los Angeles office are busily practicing up on the snappy execution of a military salute which they anticipate will be expected of them on the return of their chief from a two-week sojourn among the big guns at Fort MacArthur. Their chief is none other than Charley Brandt — Lieutenant Charles Brandt, suh!—of the 975th Coast Artillery. Another big grape shot and shrapnel expert is Lieut. Lynn Smith, of the Distribution Division and the 977th Coast Artillery, who served for two weeks earlier this summer as executive officer of the C. M. T. C. camp at Fort MacArthur.

* * *

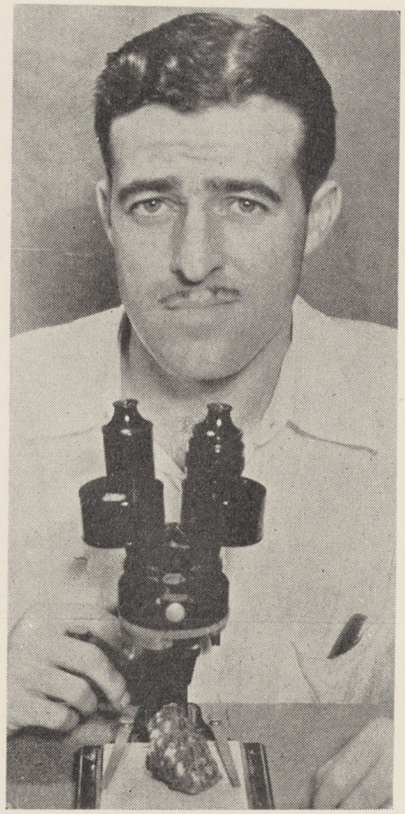
Bachelor ranks in Division 6 have been considerably thinned by several recent casualties. On July 6, Don DeWitt, chief concrete inspector at Valverde tunnel, fell mortally wounded by a stray dart from Cupid's bow. Miss Dorothy Dickens of Los Angeles is the captivating bride. Before recovery from shock and surprise a second blow was dealt, this time by the desertion from the ranks of Ed Hannel, chainman, who plighted his troth to Miss Madeline Wilkinson, of Perris, on July 14. The most confirmed bachelor of them all, Bill Arnold, concrete inspector at Bernasconi, passed quietly away to join the benedicts on August 10, with Miss Betty Sprague of Beaumont as his bride. Rumors of further inroads have sent remnants of the once powerful "Triple V" bachelor club (Vestal Virgins of Valverde) into full retreat. Several members are reported to be in hiding until the current epidemic of the malady has run its course.

Aqueduct Temperatures
August 1 to 15, 1935

	Max.	Min.
Div. 1	113°	75°
Div. 2	111°	81°
Div. 3	109°	72°
Div. 4	105°	76°
Divs. 5 & 6	102°	53°

Fargo's flagpole is sporting the Coachella Division progress banner this month as a result of 707 feet of progress made in the West Heading during July.

Coachella and San Jacinto safety flag winners will be announced in the next issue of the NEWS.



Dame Rumor has it that Assistant Engineer L. H. Henderson is thinking of buying a turban (wouldn't he look cute in one, girls?) and a crystal ball. His theory is that his long experience stooping over the double-barreled spy glass shown above has given him the proper posture for crystal gazing. And furthermore, who ever heard of a seer who could look right into the vitals of a solid mountain? That's what Mr. Henderson does in his job of mapping subsurface geology of aqueduct tunnels. He feels that in comparison, the job of looking into comparatively hollow craniums should be a cinch.

The Banning Aqueduct nine again stepped into the win column the other night by defeating a Redlands squad on the Banning High School diamond to the tune of 10 to 5.

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Merritt H. Dailey, Jr., concrete inspector at Hayfield No. 1, Division 3, and Miss Helen Graham of Long Beach were married at the Mission Inn, Riverside, on August 3, 1935.

* * *

Lawrence L. Whiteneck, concrete inspector at Hayfield No. 1, Division 3, and Miss Marjorie Goodwin of Las Vegas, Nevada, were married at the Wee Kirk o' the Heather on June 29, 1935, it was learned last week.

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The Indio Warehouse is no more. Part of it is at Pushawalla and part at Beaumont. The separation took place in order to make facilities more accessible to both the Coachella tunnels and the San Jacinto job.

* * *

Determined to discover whether or not the Alps are what they are cracked up to be—and if any single Alp can compare with Iron Mountain—William Deppler, hoistman for Winston Brothers at East Iron Mountain shaft, is now on a three months' trip to Switzerland.

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Aqueduct friends of Gustav Seligmann, formerly an engineer with the Metropolitan Water District, will be interested in knowing that he has been appointed director of the Eastern Area of the Los Angeles County Relief Association.

* * *

Friends on Division 4 are just beginning to learn of the marriage—last April 7—of Harold T. Snow and Miss Ruth Williams. The ceremony, which culminated a romance of twelve years, was kept secret from family and friends until a short time ago. The bride is head of the foreign languages department of Hoover High School in Glendale.

* * *

Another aqueduct wedding of interest occurred on August 1 at San Gabriel Mission when Miss Patricia Murdick of the Banning Office became the bride of John E. Bianco, Los Angeles banker. The newlyweds enjoyed a honeymoon in San Francisco and the Redwood country. Miss Blanche MacDonald has taken Miss Murdick's place in Mr. Bond's office at Banning.

Committee Heads Chosen For Picnic

Plans for the annual employees' picnic —to be held September 15 at Brookside Park, Pasadena—advanced another step last week when Picnic Chairman B. H. Martin announced the appointment of the following to the General Committee:

M. W. Hawks, B. A. MacArthur, H. A. Beall, W. D. Sheffey, and Richard Stevens.

In addition, the following committee chairmen were appointed:

Ed Miller, refreshments; Bill Aultman, athletics; Bob Speers, publicity; Elizabeth Von Hagen, attendance; I. R. Pontius, reception, and Saul Joseph, finance and prizes. Membership of these various groups will be selected within a few days.

This year's picnic is being given by employees of the Los Angeles office for employees from the field forces of the District.

Brookside Park was chosen for the affair because of its central location and because it is fully equipped with a swimming pool, a golf course, a baseball diamond, and tennis courts.

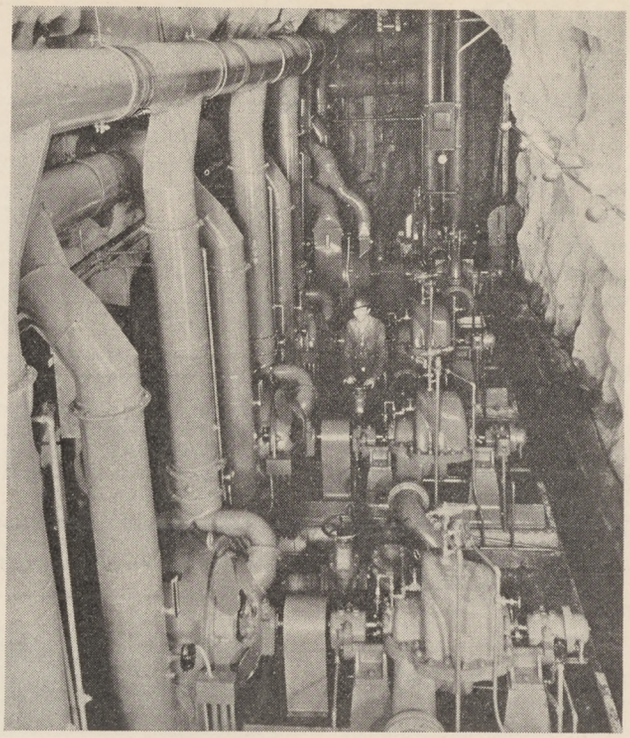
The date of the picnic was set rather late in the season this year to avoid the heat, and also to make it at a time when most vacations will be over, thus insuring a larger attendance than would result earlier.

Plan Ceremony At San Rafael Tunnels

Members of the District Board of Directors last Friday authorized the making of plans for a fitting ceremony to mark the commencement of work on the San Rafael Tunnels Nos. 1 and 2 of the aqueduct distribution system.

It was pointed out that the start of work on the bores by Dixon-Bent-Johnson crews marks the bringing of Colorado River Aqueduct construction into three of the cities in the District, since the two tunnels will lie within Pasadena, Los Angeles, and Glendale.

Operations are scheduled to be launched within a few weeks at the East Portal of San Rafael No. 2, located on North Figueroa Street, north of Colorado Boulevard and across the ravine from Eagle Rock, in Eagle Rock. The ceremony would be held at this point.



The New Cabazon Pump Station, San Jacinto Tunnel.

New Distribution Tunnels Are Awarded

Increasing the underground mileage of the Colorado River Aqueduct project by two and one-quarter miles, two new tunnel sections have been added to the construction program of the District.

Acting on the recommendation of General Manager Weymouth, the Water District board of directors has approved contracts totaling $460,916 for the construction of the 1.14-mile Sierra Madre tunnel and a 1.04-mile extension to the Pasadena tunnel. Both of these new sections of bore are on the aqueduct distribution system. The contracts also include short sections of pressure pipe, totaling one-tenth of a mile in length.

The Pasadena tunnel and pipe line sections were awarded to L. E. Dixon, Bent Brothers, and Johnson, Inc. The Sierra Madre tunnel and pipe line will be constructed by J. F. Shea Company, Inc.

Both the Pasadena and Sierra Madre tunnel sections will be excavated beneath the two cities for which the bores are named. Materials, engineering, and other items to be furnished by the District, it is estimated, will bring the total cost of the new work up to $853,390.

Details of Cabazon Pump Station Given

Above is shown the first picture to be taken of the newly installed Cabazon pump station in operation.

Essentially similar to that at the 796-foot Potrero shaft, the equipment pictured above is located at the bottom of the 246-foot shaft and has a total pumping capacity of 13,500 gallons per minute.

There are five 2,500 gpm and one 1,000 gpm units. The principal difference between the two installations is that at Cabazon the pump chamber underground is connected with the surface by an auxiliary shaft separate from the working shaft.

A concrete plug between the chamber and the tunnel prevents water from entering the chamber even should the tunnel and main shaft fill to the top. The auxiliary shaft provides access from the surface to the chamber under all conditions, and provides a convenient outlet for the discharge pipe lines and entries for power leads and control cables.

The chamber, excavated from solid rock, is approximately 60 feet long and 15 feet wide.

An idea of the size of the equipment may be gained by comparing it with the man in the picture above.